ABSTRACT OF THE DISCLOSURE

Described are a novel cell type in the neural lineage, and method of producing the same based on the degree of neural commitment and growth factor responsiveness in vitro and the potential to give rise to neural and non-neural progeny in vivo. The novel vell type of neural lineage and cells derived therefrom have a number of applications including applications regarding tissue engineering, transplantation and gene therap and drug discovery. Also described are suggested uses of the method and cell type including isolating genes that positively and negatively regulate the transition from an ES cell to a neural cell and generally for studying ES cell models of mammalian neural development.